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Status PROTOTYPE

Drawn By: Madison Gleydura

Embry-Riddle Aeronautical University

Sheet: /Battery Charger/

File: battery_charger.kicad_sch

Title: LiFePO4 Charger

Size: USLetter

Date: 2024-11-20

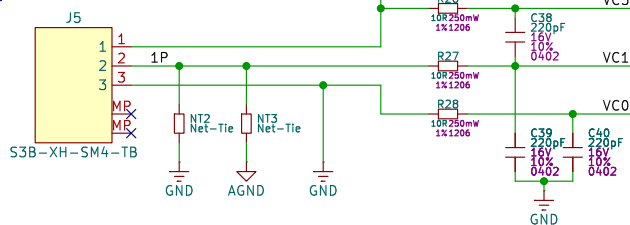
Rev: 01

KiCad E.D.A. 8.0.6

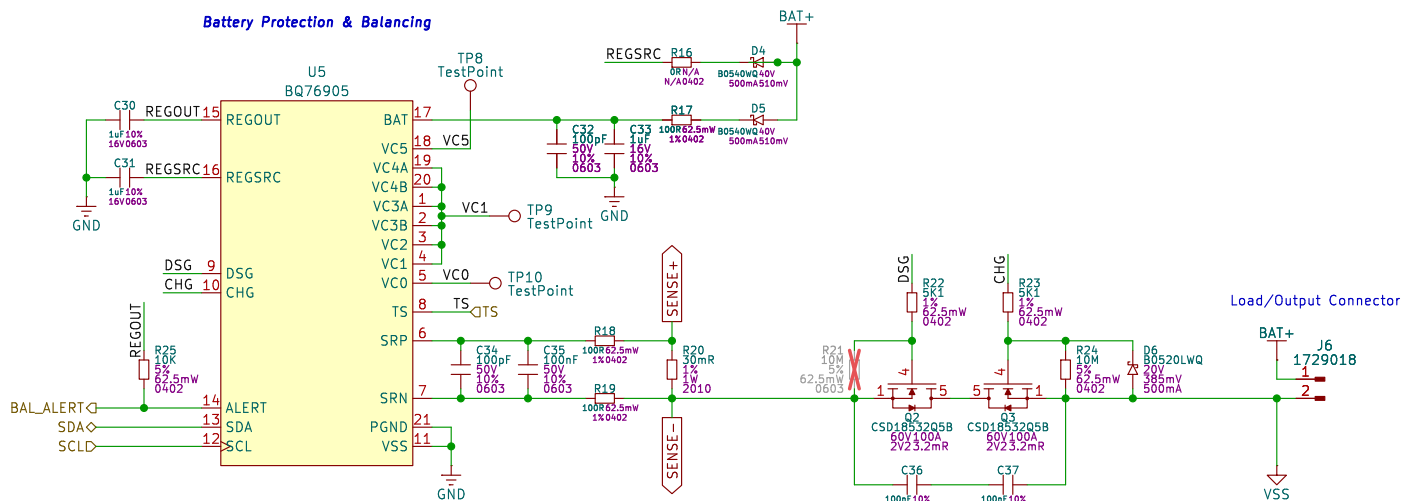
Id: 2/4



MaxAmps
LFP-Max LiFePO4 5000 2S 6.6V
Battery Pack Balance Connector



Battery Protection & Balancing



$$\begin{aligned} V_{sense} &= R_{sense} * I_{max} \\ V_{sense} &= \pm 125mV \\ I_{max} &= 4A \end{aligned}$$

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Status PROTOTYPE

Drawn By: Madison Gleydura

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Sheet: /Battery Monitor/

File: battery_monitor.kicad_sch

Title: LiFePO4 Protection & Balancer

Size: USLetter

Date: 2024-11-20

Rev: 01

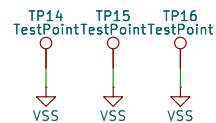
KiCad E.D.A. 8.0.6

Id: 3/4

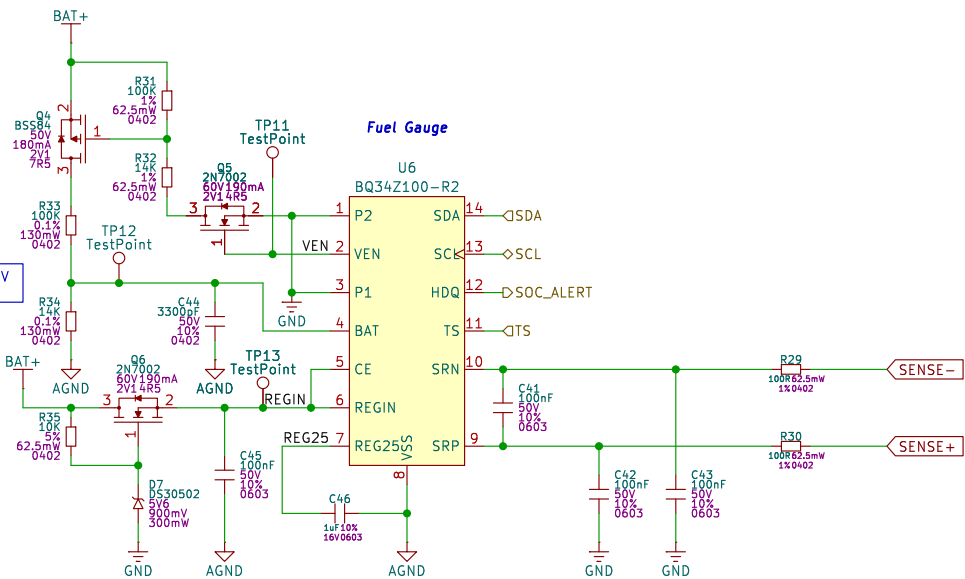
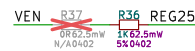


$$R33 = R34(V_{max} - 900mV) / 900mV$$

$$V_{max} = 7700mV$$



Pull VEN low to disable power saving mode



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Status PROTOTYPE

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Sheet: /Fuel Gauge/

File: fuel_gauge.kicad_sch

Title: LiFePO4 State of Charge

Size: USLetter

Date: 2024-11-20

Rev: 01

KiCad E.D.A. 8.0.6

Id: 4/4

